

Application No. 10/526,104
Amendment dated October 25, 2007
Reply to Office Action of June 25, 2007

Docket No.: 06920/0202589-US0

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 1. Fig. 1 is now designated as "PRIOR ART".

Attachment: Replacement sheet

REMARKS

A replacement drawing sheet for Fig. 1 labeled PRIOR ART is presented.

Claims 1-4 are pending. Claims 5-7 are added.

Claims 1-4 are rejected as being unpatentable over Cole, et al, U.S. 6,016,665 in view of Katsuki, et al., U.S. 5,735,135.

In the present invention, as set forth in claims 1-4, a pre-cooling exchanger, a first refrigerant compressor, a cryogenic heat exchanger and a second refrigerant compressor are installed at one side of a piping complex. In Cole, a section corresponding to the piping complex of the present invention is not disclosed. Since the section corresponding to the piping complex as the basis of the device arrangement of the present invention is not disclosed in Cole, it is impossible to determine that the devices are installed at one side of the piping complex.

In Katsuki, an air conditioning system is disclosed. However, the air conditioning system is for cooling air in multiple rooms in parallel, and is not related to the present invention nor is it related to Cole.

In the present invention, a natural gas to be subjected to cooling is previously cooled in the pre-cooling exchanger, and then the gas is cooled in the cryogenic heat exchanger. The gas is supplied to the cooling exchangers in sequence. However, with the air conditioning system of Katsuki, the air in each of the rooms to be cooled is not supplied to heat exchangers in sequence but is supplied to the exchangers in parallel. That is, the present invention differs from the air conditioning system of Katsuki from a technological standpoint.

The combination of Katsuki with Cole does not appear to be proper. Cole and the application claims 1-4 are directed to gas liquefaction apparatus while Katsuki is directed to an air conditioning system. The effect sought to be obtained by each is considerably different. Therefore, it is not obvious to one of ordinary skill in the art from the teaching of Katsuki to modify the liquefaction system of Cole. Accordingly, claims 1-4 are patentable over the combination of Cole in view of Katsuki and should be allowed.

Claims 1-4 also are rejected over the combination of Roberts, U.S. 6,119,479 in view of Katsuki. The argument presented above relative to Cole applies equally to Roberts. That is, in Roberts a section corresponding to the piping complex of the present invention is not disclosed.

Since the section corresponding to the piping complex as the basis of the device arrangement of the present invention is not disclosed in Roberts like Cole, it is impossible to determine that the pre-cooling exchanger, the first refrigerant compressor, the cryogenic heat exchanger and the second refrigerant compressor are installed at one side of the piping complex.

As discussed above, the present invention differs from the air conditioning system of Katsuki from a technological standpoint. The analysis of Katsuki presented above also applies to this rejection, as does the impropriety of making the combination of Roberts and Katsuki. It is not obvious to one of ordinary skill in the art from the teaching of Katsuki to modify the liquefaction system of Roberts.

Therefore, claims 1-4 also are patentable over the combination of Roberts and Katsuki, and the claims should be allowed.

New claims 5-7 each depends from claim 1 and sets forth additional features of the invention which further define patentability of the invention of the application. Therefore, these claims also are patentable and should be allowed.

Prompt and favorable action is requested.

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Respectfully submitted,

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